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Walter of England collection published by Mr. Hervieux in his second volume (pp. 316-339), the last fable of each collection being that of "The Nightingale and the Hawk."

The Reims ms. 1275 is not, however, the former Phillipps ms. 1694, as is proved by the following statement of Mr. Demaison: "Nous n'avons à Reims aucun manuscrit provenant de la bibliothèque Phillipps. Le manuscrit 1275 de notre bibliothèque provient du chapitre de Reims, qui l'a possédé jusqu'à la Révolution."

Resolved to find the present owner of the Phillipps ms. 1694, I wrote to the British Museum for the desired information. The answer to my inquiry informed me that T. Fitzroy Fenwick, Esq., Cheltenham, England, was the only person who could tell me what had become of ms. 1694 of the Phillipps Library. A letter to Mr. Fenwick secured the desired information, namely, that the Phillipps ms. 1694 is now in the Royal Library in Berlin, where it is numbered 180 in the catalogue of the Phillipps mss. in that library.

Of the numerous collections (more than a hundred) of the fables of Walter of England, two fragmentary collections are practically identical. One of these fragmentary collections (Phillipps ms. 1694) was known to and described by Mr. Hervieux; the other (Reims 1275, fols. 156r-159r) is, I believe, here for the first time mentioned as belonging to the collection of Walter the Englishman.

PIERRE JOSEPH FREIN.

University of Washington.

TWO INVESTIGATIONS IN FRENCH PHONETICS.

Students of Phonetics, pure or applied, will be interested in an article which has recently appeared in the "Mémoires de la Société Néophilologique" of Helsingfors (Volume III, Paris, H. Welter).

In the contribution referred to, "Deux questions de Phonétique française," M. J. Poirot gives the results of certain experiments bearing: 1° upon the effect of labialized vowels upon a preceding labial explosive; 2° upon some aspects of "e muet."

The first investigation deals with a familiar phenomenon, namely, the change of position of the "line of occlusion" in the case of a labial explosive when followed by a labialized vowel, and likewise a difference in the character of the explosion, due to the presence of such vowel.

M. Poirot's conclusions from his experiments on the labialized vowels are in no wise different from what we should expect after reading Rousselot's and Demeny's reports of observations in the same line.¹ They confirm also impressions obtained auricularly by many observers, and their value is, of course, in their scientific precision.

Setting out with the readily granted hypothesis that the non-labialized vowels do not modify the position of the lips in the utterance of *p*, *b*, *m*, the experimenter notes that the French labialized vowels *o* and *eu*, and their modifications, in which the lips are rounded practically without being advanced, show no change in the "line of occlusion," or but a slight one. His method is to pronounce *pa*, stopping at the occlusion of the consonant and coloring with some dye the exposed surfaces of the lips. On opening the mouth, the anterior limit of the contact is distinctly marked. Continuing the experiment, and proceeding similarly with *pé*, *pi*, *po*, *peu*, *pou*, *pu*, and measuring in each case, M. Poirot detects in his own pronunciation a slight recession of the anterior limit, averaging 1.25 mm., for *po* and *peu*, whereas for *pou* and *pu* the advancement of the lips causes a recession of the line of from 3.5 to 4 mm. Here evidently is a reason for the quality of the French labial explosives before *ou* and *u*, as compared with the same consonants in English and German, the English having no rounded vowel with advancement of the lips and the lip advancement in German being much slighter than in French.

In order to get a more accurate idea of this French quality of the labial explosive before *ou* and *u*, M. Poirot has made another order of experiment. Being in Paris for a short time, he invoked the aid of the laboratory of experimental phonetics of the Collège de France and used as subjects himself, M. F. Laclotte (author of *Précis de Prononciation française*), and an Amer-

¹ Rousselot's *Principes de Phonétique Expérimentale*, Pt. II; Demeny, *Analyse des mouvements de la parole*, Journal de Physique, 1893.

ican by the name of Howard, who was working in the laboratory. He presents in tabular form the measurements taken in fifty-six experiments, all three persons pronouncing the syllables *pa* and *pou*. For the syllable *pou* the American subject uttered the word *poor*. M. Poirot alone pronounced *pi* and *pu*. By means of a simple mouth-piece and drum a tracing was made by which the duration and varying pressure of each explosion (*résolution de l'occlusion*) could be carefully observed. The duration of this explosion being represented in figures, and also the ratio between the highest pressure at the instant of explosion and the pressure remaining at the point where vowel vibrations began, M. Poirot was able to say with certainty that the explosion, and consequently the reduction of pressure, was much slower in the French *pou* and *pu* than in the other syllables cited.

In the case of *pa*, *pi*, *pé*, and even *po* and *peu*, the opening of the lips is almost vertical, the release of tension and reduction of pressure being practically instantaneous. The same thing was remarked in the utterance of the word *poor* by the American, as was to be expected. Some characteristic figures are as follows :

<i>pa</i>	Laclotte length of explos'n on trace, averages 1 mm.				
	Poirot	"	"	"	2 mm.
	Howard	"	"	"	2 mm.
<i>pou</i>	Laclotte " " " " " 2.5 mm.				
	Poirot	"	"	"	4 mm.
	Howard	"	"	"	1.5 mm.

When the two French subjects pronounced *pou* and *pu*, the separation of the lips was not vertical, but, owing to their advancement, was oblique and hence gradual, the reduction of the pressure being much slower. The acoustic effect of this form of explosion being not only to diminish the effect of sharpness, but to give to the consonant a spirant or a vibratory character. M. Poirot represents the sound, so familiar to speakers of French, by *p^ru*, and is inclined to ascribe it and the accompanying slowness in the reduction of pressure to the impounding, so to speak, of air between the teeth and the advanced lips. The sound is, of course, very different from the English breathing which so often follows the occlusive or stop consonants, and which can proceed from the larynx.

That the result of these experiments should have been as it was is not surprising, but we

cannot help thinking that it might have shown even greater contrast, in the essential points, between French and American articulation, if persons less sophisticated than workers in a phonetic laboratory had been chosen. The American in question may well have been influenced by his foreknowledge of the result expected. Or, on the other hand, his familiarity with French may have led to a pronunciation unconsciously modified, for we are told nothing as to this subject's proficiency in the language of the experimenter.

The discussion of the matter of *p* and *b* before *ou* and *u* throws light upon the phenomenon of an occasional startling sharpness of *p* in French speech. It is probable that this striking character of the explosion is due not only to contrast with the feebler articulation of the English, but also to contrast in the utterance of the French themselves with the gradual release of this consonant before the advanced labial rounding of the vowels in question. It is altogether reasonable to infer from this proof of the effect of *ou* and *u* upon a preceding labialized explosive that their influence upon the occlusion of a labialized explosive following would be analogous.

M. Poirot's second investigation is in a direction less familiar. His conclusions, though as he modestly admits merely tentative, will be of value to the student of speech melody in French. It seems also to explain, at least in a measure, certain phenomena in the evolution of vowel pronunciation in French between the years 1500 and 1700.

The object of his search is the effect of *e muet*, whether uttered or merely felt, upon the contiguous syllables and sounds. That such influence exists no one will be disposed to deny, although most treatises on pronunciation maintain that in Parisian French the final *e* of feminine participles has no effect upon a preceding vowel. In the provinces, however, its lengthening influence is unmistakable, and M. Poirot's experiments, he expressly tells us, were by no means extensive in Paris, owing to a very short sojourn there.

We know, in spite of statements to the contrary, that *e muet* final in the Parisian speech affects the preceding consonant and perhaps in the direction of relaxation of articulation. The

evidence of Rousselot's *Étude de la Prononciation parisienne* is conclusive only as to the existence of some modification, as may be seen by consulting his diagrams of artificial palate records (p. 12, figs. 257 to 280). It would seem, therefore, that similar modification of a preceding vowel (as in *chanté, chantée*) might be admitted, and that, without direct evidence to the contrary, M. Poirot's conclusions regarding provincial French might be accepted as applicable to Paris also, although probably in diminished degree.

Availing himself of the vast category of French words ending in a vowel and having *e muet* to form the feminine, namely, participles, he finds : 1° that the final vowel sound is *longer* in the feminine ; 2° that this vowel is *relaxed* or weaker in tension ; 3° that, whereas the final syllable of the masculine has an accent that is *acute* (*aigu, frappé*), the feminine form has a double or *circumflex* accent (*accent traîné*) ; 4° that, as would be natural from relaxation, the vowel of the feminine is uttered on a slightly *lower note* than that of the masculine. This difference of pitch must be understood as relative only, for the speech of individuals varies greatly in contrast of tones, and the exigencies of signification may produce an actually higher note in the feminine than in the masculine.

Taking adjectives ending in the masculine with a consonant (*cher, vif*), M. Poirot finds analogous changes when *e muet* is added (*chère, vive*), that is, the various indices of relaxation. So far monosyllables were employed, and the results are given as follows :

Masculine	Feminine
vowel, shorter	vowel, longer
tension, greater	tension, less
accent, acute (<i>frappé</i>)	accent, circumflex (<i>traîné</i>)
note, higher	note, lower.

Passing to dissyllables (*aimé, fini*), the comparison is this :

Masculines, first syllable, atonic ; second syllable, tonic ;
 first vowel, relaxed ; second vowel, tense ;
 first syllable, accentuated gradually ; second,
 accentuated abruptly ;
 first syllable, note lower ; second, note higher.

The feminines, on the other hand, show a first syllable remaining atonic, but in spite of that the second syllable has a vowel considerably relaxed,

an accent of lessened abruptness, and circumflexed, and a lower note. Instead of going from relaxed to tense, from lower to higher pitch, from less to greater force, the reverse is the rule. The most convincing, and indeed the most obvious, examples of this difference in the utterance of dissyllables are to be found in words where the two vowels are identical, as *fini, cédé* (the tonality then being $fi+ni^+$ and $fi+nie^+$, $cé+dé^+$ and $cé+dée^+$) ; but, due allowance for characteristic notes of *different* vowels being made, the rule is the same in other cases.

M. Poirot prints a table of figures representing measurements taken from a large number of traces made by him with apparatus more or less familiar, (*oreille inscriptrice* and cylinder, as described by Rousselot, *Principes de Phonétique*, p. 69 *et seq.*). We are not concerned with the process, and may accept the experimenter's statement that the relative exactness of these figures is sufficient. A few examples will serve to make our meaning clearer (the numbers are length of duration of final syllables in tenths of a second) : *chanté*, 1.34, *chantée*, 2.45 ; *portail*, 1.32, *bataille*, 1.77 ; *natal*, 1.75, *natale*, 2.32 ; *sorti*, 1.88, *sortie*, 2.84 ; *le cou*, 1.12, *la boue*, 2.01. Without adding to the list, let us notice the *note* of the final syllable (figures are numbers of vibrations per second) : *sorti*, 169.01, *sortie*, 149.9 ; *le cou*, 141.9, *la boue*, 126.01 ; *boiteux*, 155.3, *boiteuse*, 142.2. Apparently the rule is uniform. It would seem also from the evidence of this test that *e muet* affects a vowel in the syllable following, as in *compris* (note of final vowel indicated by 204.02 vibrations per second) and *repris* (note of final vowel 187.7 per second) ; *concourut*, penultimate vowel (170.5 vibrations) ; *secourut* (153.9 vibrations).

Thus far the proof is plain, and M. Poirot is inclined to conclude that *e muet* being by nature *relaxed* induces relaxation of articulation in its immediate vicinity, for instance, its presence in verb forms being accompanied by lower pitch in a preceding vowel, as *deux fois* (vibrations per second in final vowel 149.), *ils croient* (vibrations per second 140.). In general, if the investigation is to be implicitly trusted, the *e muet* in verbs is responsible for a change of character (*coupe*) in an accented syllable (*je crois* and *je croie, il es-*

sayait and *ils essayaient*, etc.). Going a little farther, the article asks us to believe that the *circumflex accent sign* has not been placed quite arbitrarily over a French vowel after which a consonant sound (notably *s*) has been lost. No consonant or vowel disappears without leaving, at least for a long time, a trace of itself, and if the circumflex sign was adopted in *dépôt*, *tôt*, etc., it really signified much the same accent that it meant in Greek, whence it was borrowed. To-day, according to M. Poirot, *canot*, *sabot* are abrupt in accentuation and their tonality high; *défaut*, *assaut*, if longer in the final vowel, are also high in pitch, while *dépôt*, *tantôt* and the like, show finals of a very different quality, the accent being *trainé*, that is, circumflex. The phenomenon is, of course, analogous to that presented by the fading of *e* syllabic into *e muet*.

The almost infallible mark of the feminine gender in French being *e muet* final, one might ask if this lower tonality found in connection with it is not indicative of the grammatical feminine. Not only does the similar accentuation due to the loss of a *consonant* sound render it likely that this is not the case, but M. Poirot's investigation seems to show that the lower note is only indirectly characteristic of the gender. We find *bonté*, in spite of being feminine, rising in tone, *bo⁺nté⁺*. *Courage*, masculine, follows the rule where *e muet* is concerned and falls, *cou⁺ra⁺ge*. But the habit of giving a descending tone to the great majority of feminine forms has its effect, and as in *mon ami⁺* and *mon amie⁺* we get a distinct difference of tonality in practically a single form, so a word like *cours* is found to vary in relative pitch according to gender (*le cours⁺*, *la cour⁺*). Other words which terminate in combinations which might be of either gender are accented strictly in accordance with this principle. The table already quoted gives us a clear instance, *futile* (masc.) had a final vowel giving 198.5 vibrations per second, while *futile* uttered as the predicate to a feminine subject showed 189. Other examples confirm the observation and M. Poirot is led to conclude that the lower note does not attach to all feminine forms as such, but does mark a feminine when there is in existence a masculine word of the same pronunciation, as *amie*, *ami*; *cour*, *cours*; *utile*, *utile*, etc.

Enough has been quoted to show the scope of M. Poirot's investigation. His chief inference has already been stated, namely, that "an *e muet* which has disappeared from the pronunciation as regards its own independent sound leaves, however, traces of its presence in modifications communicated to the syllable which precedes it."

M. Poirot declines to deal with this question historically, but it may not be amiss to call attention here to a fact which seems in a measure to confirm his observations. One French vowel, at least, gives evidence, by diacritic signs, as to its evolution since the year 1500. Inexact as the information may be, we have some clue to the pronunciation of *e* when we find it surmounted by an acute or a grave "accent."

From a very early period *e* final tonic seems to have been recognized as acute, and the authors of the fifteenth century mark it without hesitation *é*; but the pronunciation of *é*, as we write it now, in other positions, especially when atonic, was not precise enough to call for particular indication. The habit of Palsgrave (1530), Robert Estienne (1549), and their contemporaries was to indicate the sound of *è* or *e ouvert* by writing after it the *s* which in so many cases had already been dropped from the speech. They even went so far as to introduce an *s*, where etymology furnished none, in order to indicate the sound of *è*. In a great number of these instances, the *e* so treated being tonic, we can reject any idea of indistinctness or dubious sound and must see in the deliberate choice of a "grave accent" recognition of the effect of a disappearing consonant on a preceding vowel.

Again, M. Poirot points out the fact that Southern Frenchmen of to-day preserve to a much greater extent than those of the North, the syllabic character of the feminine *e* final, and that they are generally admitted to utter the vowel in the preceding syllable on a higher note, that is, making it more *acute* and seemingly, but not really, shorter. Now, the authors of the sixteenth century are unanimous in their testimony that among the French of their time the *e* feminine final was sounded very distinctly (Thurot, *Prononciation française*, vol. I, p. 162). Palsgrave in his *Éclaircissement de la langue française* (1530) gives a description of its sound, and inci-

dentially of its relation to the preceding syllable, which is, as far as description can convey, the Gascon pronunciation of the present. "The *e* ought to be pronounced somewhat like an *o* . . ." (*homme, femme, honneste, parle, avecques* are his examples). "If one raises the voice on the syllable that precedes the *e* final in these words, and letting it fall suddenly one pronounces the *e* final rather like an *o* and strongly in the nose, one will pronounce it as the French do." From Palsgrave's day, however, the importance of the final *e* atonic has been diminishing, but it is clear that it then had great prominence even after an *e* tonic without intervening consonant. Ronsard was so hampered by it in this position that in his *Art Poétique* (1565) he counsels its complete abolition, but such was its force that his advice was not followed. On the contrary, his prescription of alternation of pairs of masculine and feminine rhymes, already practiced, by the way, was taken unanimously. The pertinacity with which this rule has been clung to by French poets goes far to prove the existence of contrasting tonality between final syllables graced with *e* atonic and others. That the Symbolists should have neglected the convention is hardly evidence of its worthlessness, for what in versification have they not neglected?

In the sixteenth century in the speech of the Isle-de-France we shall note that in a very long list of words *e* tonic coming from Latin *a* was pronounced, and later marked, *acute*, in spite of being followed by a consonant and an *e* atonic final. This was particularly the case at that date with the terminations *-eve, -ere, -evre*. Thurot (vol. I, p. 63) notices the fact that the fuller syllabic quality of the *e* final must have had its effect, and that the gradual reduction of it to a true *e* *muet*, as he says, leaving the consonant to become a part of the preceding syllable, "*l'e tonique commença à se prononcer faiblement ouvert avec un son que les grammairiens ne savaient trop représenter, qu'ils disaient généralement intermédiaire entre é et è.*"

Whatever is to be said of Thurot's explanation, the evidence he has collected shows that as the reduction of *e* atonic final went on the preceding tonic *e* became more open. In 1659 Chifflet (*Essay d'une Parfaite Grammaire de la Langue*

française) lays down as a rule that penultimate *e* followed by a consonant and *e* feminine final must be pronounced *open*. Thurot notes, however, that at that time *piège, liège, siège, père, mère, frère*, were exceptions, and we know that even Littré said "*piège*," in accordance with the usage of 1800 to 1850. The progress towards an open *e* was commensurate with the reduction of the *e* final.

M. Poirot's evidence, which may be taken to mean that the *grave* quality of this penultimate vowel is primarily due to lowering of the note seems better than Thurot's notion that the fall of the final *e* left the consonant to "attach itself to the preceding vowel" with an opening effect. At any rate the finer means of testing the matter which we owe to mechanical appliance indicates that a like change is worked on a preceding vowel in a past participle where no consonant has been left to "attach itself."

Although not in contradiction of phoneticians' impressions generally, M. Poirot's final conclusions may be quoted here as tending to settle a point yet discussed, namely, what relation force and pitch accent bear to each other in French. He says:

"Le français a — 1°. Un accent simple, aigu, à coupe brusque, la note la plus élevée; 2° Un accent simple aussi, mais grave, à coupe lente, note plus basse; 3° Un accent double, circonflex, à coupe plus lente, note encore plus basse. Toutes ces remarques se rapportent à une énonciation à la forme la plus simple sans accent émotionnel spécial.

"L'accent tonique en français est donc dynamique, mais la tonalité élevée peut l'accompagner ou pas. L'accent chromatique varie alors en français."

CHARLES C. CLARKE, JR.

Sheffield Scientific School, Yale University.

VIEWS OF TRAGEDY AMONG THE EARLY GERMAN ROMANTICISTS. I.

It cannot be said that the tragedy problem played in any way an important part in the æsthetic views of the German Romanticists. A really systematic treatment of it is not found at all